

## REMARKS

Claims 17-33 are now in this application. Claims 1-16 are rejected. Claims 12 and 13 are objected to. Claims 1-16 are cancelled herein and replaced with new claims 17-33.

Applicant herein traverses and respectfully requests reconsideration of the rejection of the claims cited in the above-referenced Office Action.

The applicant and applicant's attorney appreciate the Examiner's granting of the telephone interview conducted on December 16, 2003, and extend their thanks to the Examiner for her time and consideration.

While no formal agreement was reached, the Examiner indicated that claiming the method of manufacturing the battery in a clear and precise manner stood a reasonably good chance of establishing patentability over the art presently of record. During the course of the interview, applicant's counsel also proposed that the structural apparatus claims could also be distinguished over Cailley by reciting a flattened spiral comprised of contiguous material free of slits. It was argued by applicant's counsel that the instant disclosure adequately describes the provision of such structure insofar as one of ordinary skill in the art would readily realize that the method described in the invention will only work if the projected portions, which are to be entirely bent radially inward, are an unbroken, contiguous sheet structure. The Examiner advised applicant to set forth this argument in detail for consideration.

Rather than amend the pending claims, it was believed preferable to cancel the claims and replace them with new claims in clean form for improved clarity and to specifically address the points raised in the discussions had during the interview. Remarks in support of patentability, and in light of the particular rejections in the Office Action, appear below.

Claims 1-16 are rejected under 35 U.S.C. § 112, first paragraph, for containing subject matter lacking an adequate written description in the specification. Claims 1-16 are canceled, rendering the rejections moot. Newly added claims 17-33 are believed to find adequate support in the specification.

The description requirement of the first paragraph of 35 U.S.C. § 112 functions to ensure that the inventor had possession of the subject matter later claimed. How the specification satisfies this requirement is immaterial. It is not necessary that the application describe every claim exactly, but only so much that persons of ordinary skill in the art will recognize from the disclosure that the applicant invented the subject matter with the claimed limitations. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90, 96 (CCPA 1976). In other words, the claimed subject matter need not be described in *haec verba* in the specification in order for the specification to satisfy the description requirement. *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989). Therefore, a determination of fulfillment of the description requirement under § 112, first paragraph, turns on whether those skilled in the art would understand what is claimed when the claim is read in light of the

specification. *Orthokinetics Inc. v. Safety Travel Chairs Inc.*, 806 F.2d 1565, 1 USPQ2d 1081 (Fed. Cir. 1986).

In the present instance, and with particular regard to the subject matter now claimed in independent claim 17, applicant respectfully submits that the disclosure contains an adequate written description for subject matter directed to “the flat planes being formed by deforming the projected portions which are initially coplanar with remaining portions of the current collectors by application of pressure by a pressing member in a molding jig of a generally cylindrical interior configuration in a direction of a spiral axis of the electrode plate group, the projected portions having contiguous structure along an extent of the spiral such that when pressure is applied by the pressing member, an entirety of each of the projected portions is bent progressively radially inward to form a contiguous flattened spiral region on each of the opposite ends of the electrode plate group which approximates a flat plane extending orthogonally to the spiral axis.”

The specification states, in the paragraph bridging pages 14 and 15, that when the electrode plate group is subjected to pressure in the molding jig, the projected portions of the current collectors “are elastically deformed to be bent radially inwards substantially at 90° . . .”. The paragraph goes on to explain that, since the electrode plates “are wound in spiral fashion, the projected portions are not bent radially outwards.” Since it is then explained that an entirety of the projected portions is bent radially inwards, one skilled in the art would be readily aware that

such mechanical phenomenon occurs by virtue of an arcuate unbroken structure of projected portions following the curve of the spiral. Indeed, if a structure with slits similar to Cailley were to be used, one could not be certain whether the tab-like projections would bend radially inwards or outwards, since there would be no tension created in the material in a circumferential direction that would operate to prevent the bending of the projected portions in a direction opposite to the concavity of the curvature, i.e., in a radially outward direction. It is this tension against radially outward bending present in a contiguous curvature of material that makes the projected portions bend radially inward in accordance with practice of the present invention. Therefore, applicants respectfully submit that the written description requirement of 35 U.S.C. § 112, first paragraph has been satisfied with respect to claim 17 and any claims depending therefrom.

Claims 5-9 are rejected as indefinite under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter of the invention. Claims 5-9 are now canceled, rendering the rejection under § 112, second paragraph moot. Claims 17-33 are added, and were drafted with consideration of the noted informalities. Allowance of the claims is earnestly requested.

Claims 1, 2, 5, 6, 9-11 and 14-16 are rejected under 35 U.S.C. § 102(b) as being anticipated by JP 10-021953 A (JP '953). The rejection of these claims is rendered moot by their cancellation herein. However, insofar as the subject matter

of new claims 17 and 18 to an rechargeable battery structure and in the event the Examiner considers asserting the present rejection against the new claims or making the next Office Action final, applicants submit the following remarks.

Claim 17 recites in pertinent part that the projected portions have contiguous structure along an extent of the spiral which form a contiguous flattened spiral region on each of the opposite ends of the electrode plate group which approximates a flat plane extending orthogonally to the spiral axis, and which region is joined on opposite sides of the electrode plate group to a positive current collecting plate and a negative collecting plate, respectively. As no such teaching is believed present in the cited JP '953 reference, the claim is thought to avoid anticipation under 35 U.S.C. § 102(b), and allowance of claims 17 and 18 is earnestly solicited.

Claims 1-9 and 15 are rejected as obvious over Tsuda et al. (US 4,332,867) in view of Cailley (US 3,761,314) under 35 U.S.C. §103(a). The rejection of these claims is rendered moot by their cancellation herein. However, applicants discuss below the subject matter of each of the new independent claims relative to this combination of references.

Claim 17 recites in pertinent part that the projected portions have contiguous structure along an extent of the spiral. As no such teaching is present in either of the cited references, a *prima facie* case of obviousness could not be established in the rejection of the claim.

Claim 19 is directed to a method of manufacturing a rechargeable battery, and includes a step whereby projected portions are deformed by pressure from a pressing member exerted while an electrode plate group is in a molding jig. No such teaching is believed present in either of the cited references, or JP '593.

Claim 24 is a method claim directed to the embodiment of the invention disclosed at page 17 of the specification with reference to Fig. 4. It includes the steps of contacting an end of the electrode plate group with a current collecting plate having a plurality of ribs which extend radially and project towards the uncoated projected portions and pressing the current collecting plate toward the electrode plate group such that the ribs bite into the uncoated projected portions. Applicants respectfully submit that none of the art of record teach this feature, and which was similarly claimed in former claims 12 and 13, held to contain allowable subject matter in the Office Action, but which were canceled in favor of new claim 24 and the claims dependent therefrom. Therefore, the objection to claims 12 and 13 has been rendered moot by the substitution of claims 24-33 therefor.

The remaining dependent claims are submitted as patentable based upon the subject matter of the claims from which they depend, as well as for the additional recitations they contain.

Applicant respectfully requests a two (2) month extension of time for responding to the Office Action. Please charge the fee of \$420 for the extension of time to Deposit Account No. 10-1250.

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited. Please charge any deficiency or credit any overpayment to Deposit Account No. 10-1250.

Respectfully submitted,  
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